OLYMPUS®

Your Vision, Our Future

Industrial Videoscope

IPLEX RX/ IPLEX RT

iPLEX

Superb Image Quality
with a Portable Videoscope

NEW



A Videoscope with a Clear Vision

The IPLEX RX and IPLEX RT provide unsurpassed image quality yet are user-friendly, and boast a portable design. The videoscopes are ideal for inspectors who require uncompromised and precise inspections.

Exceptional Image Quality

- Our brightest and sharpest image quality
- Recorded images and movies in high quality
- Expanded image adjustment capability* for optimum inspections
- Large 6.5 in. monitor

Operation with Ease

- Compact and portable casing
- Multi-positioning design for comfortable inspection for any application
- Excellent scope maneuverability with TrueFeel™ and Tapered Flex™ technologies
- Intuitive and quick operation



Sharp and bright image of engine combustion chamber



Comfortable operation using shoulder strap

Rugged and Durable

- Heavy-duty system compliant with MIL-STD and IP55
- High-durability insertion tube withstanding crush and abrasion
- 100 °C / 212 °F capable insertion tube with temperature alert*

Advanced Functionality

- Stereo Measurement* for objective inspections (to be released in 2014)
- PDF display function* enabling efficient inspection work
- InHelp™ software to streamline all steps from inspection to report generation



The IPLEX RX faces the elements on a rainy day



The IPLEX RX monitor displaying a manual PDF during inspection

*IPLEX RX only

Exceptional Image Quality
to Improve Inspection Quality

Our Best Image Quality

The IPLEX RX and RT feature the best image quality of our videoscopes. Our unique PulsarPic™ image processor reduces noise and sharpens images, resulting in the exeptionally high resolution image.

The IPLEX RX and RT faithfully and brightly reproduce very small defects, and the sharp and clear images enable accurate and reliable inspections.

2X Brighter Illumination System

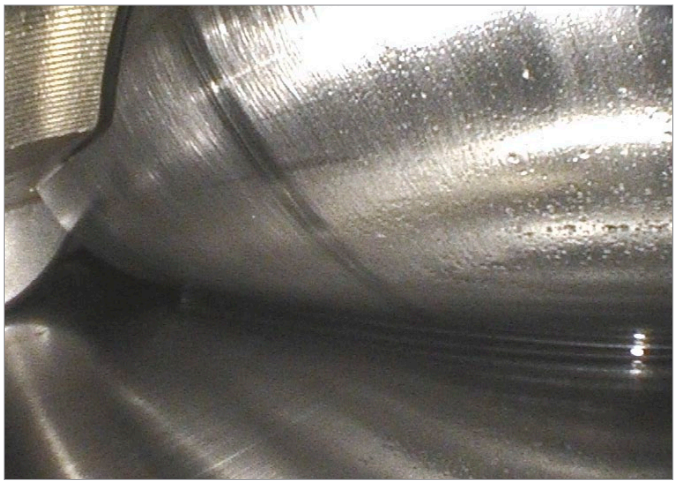
The IPLEX RX and RT feature a new LED illumination system that is approximately twice as bright as conventional videoscopes, while dynamically adjusting light output to reduce halation when metal or reflective surfaces are inspected.

The PulsarPic™ image processor interacts intelligently with our illumination system to deliver an optimized amount of light and gain enhancement to provide images that are very clear and sharply defined.

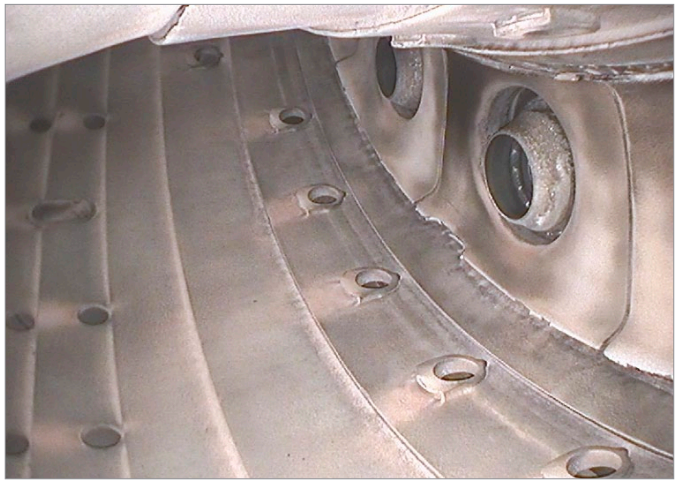
Diverse Applications



Turbine blades



Bearing of wind gearbox



Combustion chamber



Welding

Rugged and Durable
for Reliable Performance Even in Harsh Environments

Robust Body

The IPLEX RX and RT pass the impact tests including vibration and drop from a height of 1.2 m/ 3.9 ft.

The tough system compliant with Military Standards withstands rough treatment and ensures reliable operation in difficult environments.



Operable in All Weather

The IPLEX RX and RT comply with internationally recognized Military Standards (MIL-STD-810F/G and MIL-STD-461F)* as well as IP55, passing a range of severe environmental tests, such as blowing rain/dust, high humidity, and icing rain. In addition, the daylight view monitor featuring low-reflection displays clear images even under bright sunlight.

*Reference page 11 for MIL-STD compliance details



High-durability Insertion Tube

Operators are often required to inspect objects inside narrow paths with rough or sharp surfaces. The insertion tube of the IPLEX RX and RT has a crush and abrasion-proof design and is covered with a tough, special processed tungsten braid.

In addition, the IPLEX RX insertion tube features high temperature resistant up to 100 °C/ 212 °F. A high temperature sensor beeps and display visual warning to prevent overheating.



Special processed tungsten braid

IPLEX RX/RT Features and Specifications*

SCOPE VARIATION

IPLEX RX model no.	IV9420RX	IV9435RX	IV9620RX	IV9635RX	IV9650RX*1	IV9675RX*1
IPLEX RT model no.	IV9420RT	IV9435RT	IV9620RT	IV9635RT	IV9650RT*1	IV9675RT*1
Scope diameter	ϕ4.0 mm (0.157 in.)		ϕ6.0 mm (0.236 in)			
Scope length	2.0 m (6.6 ft)	3.5 m (11.5 ft)	2.0 m (6.6 ft)	3.5 m (11.5 ft)	5.0 m (16.4 ft)	7.5 m (24.6 ft)
Exterior	High durability tungsten braid					
Tube flexibility	Uniformed stiffness		Tapered Flex™ tube with flexibility gradually increasing toward the distal end.			
Articulation angle up/down/right/left	130°	130°	150°	130°	*1	*1
Approx. system weight (with battery)	2.9 kg (6.4 lb)	3.0 kg (6.6 lb)	3.1 kg (6.8 lb)	3.2 kg (7.1 lb)	*1	*1

*1. To be released in 2014

	IPLEX RX	IPLEX RT
INSERTION TUBE		
Articulation mechanics	Improved TrueFeel™ scope tip articulation with electronic power-assisted, manual articulation	
Temperature sensor	2-stage indicator for high temperature warning.	N/A
Illumination	Ultra-high intensity LED illumination	
Optical tip adaptor locking mechanism	Double threaded attachment, with O-ring seal	
HANDHELD CONTROL UNIT		
Dimensions (W xD x H)	365 mm x 93 mm x 192 mm (14.4 in. x 3.7 in. x 7.6 in.)	
Weight	Approx. 1.0 kg (2.2 lb)	
Quick access buttons	The following features have dedicated quick access buttons, levers or joysticks on the hand control unit: Scope articulation control, Image controls, Record still/video, Menu access	
MAIN UNIT		
Dimensions (W x D x H)	227 mm x 64 mm x 189 mm (8.9 in. x 2.5 in. x 7.4 in.) Maximum Dimension: 239 mm x 99 mm x 215 mm (9.4 in. x 3.9 in. x 8.5 in.)	
LCD monitor	6.5 in. daylight-view LCD, anti-reflective type	
Power supply	Battery: 10.8 V nominal, approx. 120-minute operating time. AC power: 100 V to 240 V, 50/60 Hz (with supplied AC adaptor)	
Video output standard	VGA	
USB connector	Type A connector, Version 2.0 standards	
SOFTWARE MANIPULATIONS		
Image manipulations	5X digital zoom, 10 step brightness control	
Gain control	3 step adjustable gain control with exclusive WiDER™ brightness level balancing technology.	N/A
Sharpness control	4 step adjustable sharpness control	N/A
Saturation control	3 step adjustable control of color saturation	N/A
Display text options	30-character title display	
RECORDING MANAGEMENT FUNCTIONS		
Recording media	USB flash memory (1 GB standard, compatible with recommended USB flash device)	
Overlay	Selectable 30 character title with date, time and system setting.	
Thumbnail image display	Recorded images can be displayed as thumbnails.	
Still image recording	Resolution — H 768 x V 576 (Pixel)	
	Recording format — Compressed JPEG format	
	Size of a single image — Approx. 300 KB (Approx. 3,400 images per 1 GB memory)	
Video recording	Resolution — H 640 × V 480 (Pixel)	
	Recording format — AVI MPEG-4 format. Can be played on the Windows Media Player.	
	Size of a single image — Approx. 500 KB per second (Approx. 30 min. per 1 GB memory)	
STEREO MANAGEMENT FUNCTIONS — OPTIONAL FUNCTION FOR IPLEX RX* (to be released in 2014)		
Distance	Distance between two points	
Point-to-line	Perpendicular distance between a point and a user-defined line	
Depth	Orthogonal depth/height distance between a point and a user-defined plane	
Area/lines	Multiple point circumstance and area measurement	

*Stereo Measurement functions are available by upgrading the IPLEX RX.

OPERATING ENVIRONMENT

Operating temperature	Insertion tube	In air: –25 °C to 100 °C (–13 °F to 212 °F) IPLEX RX –25 °C to 80 °C (–13 °F to 176 °F) IPLEX RT
		In water: 10 °C to 30 °C (50 °F to 86 °F)
	Other parts than above	In air: –10 °C to 40 °C (14 °F to 104 °F) with battery 0 °C to 40 °C (32 °F to 104 °F) with AC power adaptor
Relative humidity	All parts	15 % to 90 %
Liquid resistance	All parts	Operable when exposed to machine oil, light oil or 5 % saline solution.
Waterproofing	Insertion tube	Water pressure resistance: IV94 series — Up to an equivalent to 3.5 m (11.5 ft) in depth IV96 series — Up to an equivalent to 7.5 m (24.6 ft) in depth
	Other parts than above	Operable in blowing rain conditions (Battery compartment must be closed). Not operable underwater.

MIL-STD COMPLIANCE

The operating environment performance is confirmed by the following MIL-STD-810F/G and MIL-STD-461F.
No warranty is given as to damage-free under any conditions. Please ask Olympus sales representative for details.

Type	Method
Vibration	MIL-STD-810F, Method 514.5, Procedure I (General vibration test)
Shock	MIL-STD-810G, Method 516.5, Procedure IV (Transit drop test)
Water resistance	MIL-STD-810F, Method 506.4, Procedure I (Rain and Blowing rain test)
Humidity	MIL-STD-810F, Method 507.4
Salt fog	MIL-STD-810F, Method 509.4
Sand and dust	MIL-STD-810G, Method 510.4, Procedure I (Blowing dust test)
Icing/freezing rain	MIL-STD-810F, Method 521.2
Electromagnetic Interference (EMI)*1	MIL-STD-461F, RS-103, (Radiated susceptibility test for non-metallic above deck shipboard conditions)
Explosive atmosphere	MIL-STD-810F, Method 511.4, Procedure I (Operation in an explosive atmosphere test)

*1. Excluding IV9675RX and IV9675RT.

Tip Adaptor Optical Specifications

OPTICAL TIP ADAPTOR VARIATION

6.0 MM VIEWING TIP ADAPTORS

		AT40D-IV96	AT80D/NF-IV96	AT80D/FF-IV96	AT120D/NF-IV96	AT120D/FF-IV96	AT80S-IV96	AT120S/NF-IV96	AT120S/FF-IV96
Optical system	Field of view	40°	80°		120°		80°	120°	
	Direction of view	Forward					Side		
	Depth of field*1	200 to ∞ mm	9 to ∞ mm	35 to ∞ mm	2 to 200 mm	19 to ∞ mm	15 to ∞ mm	1 to 25 mm	3 to ∞ mm
Distal end	Outer diameter*2	ø6.0 mm							
	Distal end*3	18.4 mm	18.9 mm	18.8 mm	18.9 mm	18.8 mm	24.2 mm		

			4.0 MM VIEWING TIP ADAPTORS				STEREO TIP ADAPTORS (4.0MM AND 6.0MM)*4			
		AT80D/FF-IV94*4	AT120D/NF-IV94	AT120D/FF-IV94	AT100S/NF-IV94	AT100S/FF-IV94	AT50D/50D-IV94	AT50S/50S-IV94	AT60D/60D-IV96	AT60S/60S-IV96
Optical system	Field of view	80°	120°		100°		50°/50°		60°/60°	
	Direction of view	Forward			Side		Forward/Forward	Side/Side	Forward/Forward	Side/Side
	Depth of field*1	35 to ∞ mm	2 to 200 mm	17 to ∞ mm	2 to 15 mm	8 to ∞ mm	*4	*4	*4	*4
Distal end	Outer diameter*2	ø4.0 mm					ø4.0 mm		ø6.0 mm	
	Distal end*3	19.0 mm			21.7 mm		*4	*4	*4	*4

*1. Indicates the viewing distance with optimal focus.
*2. The adaptor can be inserted into a ø4.0 mm and ø6.0 mm hole when it is mounted on the scope.
*3. Indicates the length of the rigid portion at the scope's distal end when mounted.
*4. To be released in 2014.

Accessories



Lithium-ion Battery
NC2040NO29
Battery charger*
CH5000C (USA type) /
CH5000X (European type)
The battery provides long-lasting operations.



Rigid Sleeve Sets
MAJ-1253 (for 6.0 mm insertion tube)
MAJ-1737 (for 4.0 mm insertion tube)
Sets are available for 6.0 mm and 4.0 mm scopes. Each set consists of three rigid sleeves of 250 mm, 340 mm and 450 mm lengths.



Optical Tip Adaptor
The wide range of the IPLEX RX and RT tip adaptors meets the optical requirements of any application.



Guide Tube for 6.0 mm diameter Long Scope
MAJ-1825-75
Protects the scope and assists in smooth entry when inserting it into a wide pipe. Available on the 6.0 mm diameter scope in 7.5 m length.



AC Power Adaptor
The IPLEX RX and RT can be operated with either the provided AC power adaptor or the battery.

OLYMPUS CORPORATION is ISO 9001 and 14001 certified

*All specifications are subject to change without notice.
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